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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/941,187      | 08/28/2001  | Larry Kim            | JAM-02102/29        | 5984             |

7590 06/04/2003

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EXAMINER

NGUYEN, LINH V

ART UNIT PAPER NUMBER

2819

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/941,187             | KIRN, LARRY         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Linh V. Nguyen         | 2819                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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***Response to Amendment***

1. This office action is in response to applicant's amendment received on 04/14/03.

Claims 1 and 4 have been amended. Claims 1 – 6, are pending on this application.

***Response to Arguments***

2. Applicant's arguments filed 04/14/02 have been fully considered but they are not persuasive. From the following reasons:

3. With respect to claim s 1 and 4, under remarks. In response to applicant's argument that the references Adrian or Chen fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Also applicant must also discuss the references applied against the features of the claims, explaining how the features claims avoid the references or distinguish from them.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Amended claims 1 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification or drawing, in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere in applicant's specification teaches or describes or support the new matter "derived from a common references" in the amended claims.

Therefore the same rejection from previous office action is applying on this office action.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 4, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Adrian et al. U.S. patent No. 5,617,058.

Regarding to claim 1, Fig. 8A Adrian et al. disclose In a switching amplifier of the type wherein one or more references are coupled to a load through gated switches controlled by a pulse-width modulated input signal (24), the improvement comprising: adding a minimum pulse width to some or all of the switching devices, one on either

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side of the load (32) to null the common-mode output presented to the load (Col. 3 lines 21 – 27, also see Figure 5 [Compensated ternary waveform at 'zero' output]).

Regarding to claim 3, wherein minimum pulse width is added during the pulse-width modulation of the input signal (Fig. 8A, Col. 8 lines 2 – 20).

Regarding to claim 4, Fig. 8A, Adrian et al. disclose an enhanced performance switching amplifier coupling an input signal to a load, comprising: at least one electrically controlled switch coupled to each side of the load; and a waveform generator (24) operative to perform the following functions: a) control the switches in accordance with the input signal, and b) adding a minimum pulse width to so as to null common-mode output presented to the load (Col. 3 lines 21 – 27).

Regarding to claim 6, wherein minimum pulse width is added by the pulse-width modulator (Fig. 8A, Col. 8 lines 2 – 20).

7. Claims 1, 3, 4, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. U.S. patent No. 5,099,408.

Regarding to claim 1, Fig. 5 Chen et al. disclose In a switching amplifier of the type wherein one or more references are coupled to a load through gated switches (2) controlled by a pulse-width modulated input signal (22), the improvement comprising: adding a minimum pulse width to some or all of the switching devices, one on either side of the load to null the common-mode output presented to the load (Col. 3 lines 43 – 50, Also see Fig. 10 for minimum pulse width  $T_d$  adding or subtracting to voltage pulse of switches).

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Regarding to claim 3, wherein minimum pulse width is added during the pulse-width modulation of the input signal (Fig. 5 [22]).

Regarding to claim 4, Fig. 5, Chen et al. disclose an enhanced performance switching amplifier coupling an input signal to a load, comprising: at least one electrically controlled switch coupled to each side of the load; and a waveform generator (22) operative to perform the following functions: a) control the switches in accordance with the input signal, and b) adding a minimum pulse width to so as to null common-mode output presented to the load (Col. 3 lines 43 – 50, Also see Fig. 10 for minimum pulse width  $T_d$  adding or subtracting to voltage pulse of switches).

Regarding to claim 6, wherein minimum pulse width is added by the pulse-width modulator (Fig. 5 [22]).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Adrian et al. in view of Applicant's Admitted Prior Art (AAPA).

Adrian et al. as applied to claim 1 and 4 above disclose every aspect of applicant's claimed invention except for wherein the switches are arranged as differential pairs on either side of the load. However that technique is a well-known and

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conventional art, as Fig. 1 Prior Art of applicant application has indicated. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the switches amplifier of Adrian et al. as differential pairs switches amplifier taught by Fig. 1 of AAPA, because it is well-known and conventional (Also see Kirn US5610553 for differential arranged pairs switches).

10. Claims 2 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Applicant's Admitted Prior Art (AAPA).

Chen et al. as applied to claim 1 and 4 above disclose every aspect of applicant's claimed invention except for wherein the switches are arranged as differential pairs on either side of the load. However that technique is a well-known and conventional art, as Fig. 1 Prior Art of applicant application has indicated. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the switches amplifier of Chen et al. as differential pairs switches amplifier taught by Fig. 1 of AAPA, because it is well-known and conventional (Also see Kirn US5610553 for differential arranged pairs switches).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

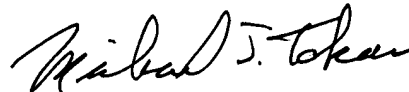
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (703) 305-1934. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Tokar can be reached at (703) 305-3493. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

LVN

May 14, 2003



Michael Tokar  
Supervisory Patent Examiner  
Technology Center 2800